

REMARKS

Claim Status and Amendments

Claims 18-34 are pending and under current examination. Applicants have amended claims 18, 21, 22, 26, 29, and 30. The amendments to independent claims 18 and 26 incorporate features from their respective dependent claims and consequently do not add new matter.

Final Office Action

Applicants respectfully traverse the following rejections:

- (1) rejection of claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34 under 35 U.S.C. § 102(b) as being anticipated by “*FOREIGN-LANGUAGE SPEECH SYNTHESIS*,” XP002285739, *Proceedings of ESCA/COCOSD A Workshop on Speech Synthesis*, pp. 177-180, (1998) (“*Campbell*”);
- (2) rejection of claims 23 and 31 under 35 U.S.C. § 103(a) as being unpatentable over *Campbell*; and
- (3) rejection of claims 20 and 28 under 35 U.S.C. § 103(a) as being unpatentable over *Campbell* in view of “*Multilingual Text-To-Phoneme Mapping for Speaker Independent Name Dialing in Mobile Terminals*,” RTO-MP-066, Sept. 2001 (“*Jensen*”).

Rejection of Claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34 under 35 U.S.C. § 102(b)

Applicants request reconsideration and withdrawal of the rejection of claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34 under 35 U.S.C. § 102(b) as being anticipated by *Campbell*. *Campbell* does not disclose each and every element of the Applicants’ claims. Moreover, the Final Office Action has mischaracterized *Campbell*.

In order to establish anticipation under 35 U.S.C. § 102, the Final Office Action must show that each and every element as set forth in the claim is found, either explicitly or inherently, in *Campbell*. See M.P.E.P. § 2131. Furthermore, “[t]he elements must be arranged as required by the claim.” *Id.* See also *Net MoneyIn, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008) (holding that “unless a reference discloses within the four corners of the

document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102”).

Independent claim 18, as amended, recites a method including, for example, “performing a category-to-category comparison between a vector representative of phonetic categories of each of said phonemes of said second language and a vector representative of phonetic categories of each of said set of candidate mapping phonemes.” *Campbell* fails to teach at least these features.

The above-quoted features were previously recited (and examined) in dependent claim 21. In rejecting claim 21, the Final Office Action alleges that *Campbell* “teaches . . . match[ing] the sounds of the target speech through the use of a mapping vector.” Final Office Action, p. 6. However, the mere fact that *Campbell* discloses the use of a mapping vector does not constitute a teaching of the above-quoted features, for at least the reasons set forth below.

First, the mapping vector of *Campbell* does not correspond to the claimed “vector representative of phonetic categories of each of said phonemes of said second language” or “vector representative of phonetic categories of each of said set of candidate mapping phonemes.” In *Campbell*, a mapping vector represents a mapping from one language to another language, such as from English to Japanese. See *Campbell*, section 2, paragraph 6, and Table 1. Therefore, the mapping vector in *Campbell* is merely a vector connecting two different languages, but not a vector representing any of the two languages.

Second, *Campbell* discloses a first language mapping method using two knowledge bases and a speech database, and a second language mapping method that replaces the knowledge base from the first method with a cepstral vector. See *Campbell*, sections 3.1 and 3.2. The first method operates by using “[l]anguage information [that] is stored in a knowledge-base and used

in the prediction of prosodic and segmental characteristics.” *Campbell*, section 3.2, paragraph 2. The first method then uses “[t]his information . . . in conjunction with a knowledge-base of speaker-specific information identifying the phonetic and prosodic coverage of the speech data which is stored separately.” *Id.*

“[T]o select more finely within the natural variation of the speaker’s data,” *Campbell* discloses a second two-stage language mapping method. *Campbell*, section 3.2, paragraph 1. Specifically, the second method operates by “first synthesizing the target speech using the voice of a native speaker of the target language and then using the acoustic waveform (or its cepstral representation) as a physical target for the selection of speech segments from the pre-stored voice database of the input speaker by minimizing a physical distance measure.” *Campbell*, section 5, paragraph 1. However, neither *Campbell*’s first nor second language mapping method teaches “performing a category-to-category comparison between a vector representative of phonetic categories of each of said phonemes of said second language and a vector representative of phonetic categories of each of said set of candidate mapping,” as recited in claim 18 (emphases added). Therefore, the general disclosure of the use of a mapping vector in *Campbell* fails to teach at least the above-quoted features of claim 18.

Moreover, the Final Office Action relies upon inherency to allegedly establish anticipation of the above-quoted features. *See* Final Office Action, p. 6. However, this reliance is not appropriate. To rely on inherency, “the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teaching of the applied art.” M.P.E.P. § 2112(IV), emphasis in original, internal citations omitted. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *Id.* Thus, “[t]o establish inherency, the extrinsic evidence ‘must make clear that

the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.*

As previously discussed, however, neither *Campbell*’s first nor second language mapping method teaches “performing a category-to-category comparison between a vector representative of phonetic categories of each of said phonemes of said second language and a vector representative of phonetic categories of each of said set of candidate mapping,” as recited in claim 18. Furthermore, even if phonetic categories are well known in the art, which Applicants do not concede, *Campbell*’s mere recitation of phonemes does not necessarily include the use of categories or “performing a category-to-category comparison between a vector representative of phonetic categories of each of said phonemes of said second language and a vector representative of phonetic categories of each of said set of candidate mapping,” as recited in claim 18 (emphases added).

In view of the above, the Final Office Action has not established that *Campbell* explicitly or inherently teaches the above-quoted features of claim 18. Therefore, *Campbell* fails to disclose each and every element of claim 18, and thus cannot anticipate claim 18. Accordingly, claim 18 should be allowable.

Independent claim 26, although different in scope from independent claim 18, recites features similar to those of claim 18. Therefore, for at least the reasons similar to those discussed above in regard to the rejection of claim 18, claim 26 should be allowable. Dependent claims 19, 21, 22, 24, 25, 27, 29, 30, and 32-34 should also be allowable at least by virtue of their dependence from claim 18 or 26, and because they recite additional features not taught by

Campbell. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Remaining Rejections of Claims 20, 23, 28, and 31 under 35 U.S.C. § 103(a)

Applicants request reconsideration and withdrawal of the rejection of claims 23 and 31 under 35 U.S.C. § 103(a) as being unpatentable over *Campbell*, and the rejection of claims 20 and 28 over under 35 U.S.C. § 103(a) as being unpatentable over *Campbell* in view of *Jensen*.

The Final Office Action has not properly resolved the *Graham* factual inquiries, the proper resolution of which is the requirement for establishing a framework for an objective obviousness analysis. *See* M.P.E.P. § 2141(II), citing to *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), as reiterated by the U.S. Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

In particular, the Final Office Action has not properly determined the scope and content of the prior art. Specifically, *Campbell* and *Jensen* do not teach or suggest what the Final Office Action attributes to them. In addition, the Final Office Action has not properly ascertained the differences between the claimed invention and the prior art, at least because it has not properly interpreted the prior art and considered both the invention and the prior art as a whole. *See* M.P.E.P. § 2141(II)(B).

As explained above, *Campbell* does not disclose or suggest at least Applicants' claimed "performing a category-to-category comparison between a vector representative of phonetic categories of each of said phonemes of said second language and a vector representative of phonetic categories of each of said set of candidate mapping," as recited in claim 18 and included in claims 20 and 23, and similar feature recited in claim 26 and included in claims 28 and 31.

The Final Office Action alleges that *Jensen* “teaches multilingual text-to-phoneme mapping.” Final Office Action, p. 9. Without acquiescing to this allegation, Applicants note that *Jensen* also fails to teach or suggest the above-quoted features, and thus does not compensate for the deficiencies of *Campbell*.

Therefore, the Final Office Action has neither properly determined the scope and content of the prior art, nor properly ascertained the differences between the claims and the prior art. Independent claims 18 and 26 should therefore be allowable over *Campbell* and *Jensen*. Therefore, dependent claims 20, 23, 28, and 31 should be allowable at least by virtue of their respective dependence from base claim 18 or 26, and because they recite additional features not taught or suggested by *Campbell* and *Jensen*. Accordingly, Applicants respectfully request withdrawal of the remaining rejections under 35 U.S.C. § 103(a).

Conclusion

Applicants request reconsideration of the application and withdrawal of the rejections. Pending claims 18-34 are in condition for allowance, and Applicants request a favorable action.

The Final Office Action contains a number of statements reflecting characterizations of the cited art and the claims. Regardless of whether any such statements are identified herein, Applicants decline to automatically subscribe to any statements or characterizations.

If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

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